BAGIAN : DESIGN 3Dsmax 8

01

3DS MAX 8

1a. Import Gambar AutoCAD

\File\Import; *.DWG; ☒ *Combine Objects by Layer* ☒ *Weld* ☒ *Auto smooth* ☒ *Unify Normal* ☒ *Cap closed object*

1b. Menggambar Objek

F12 = pindah

= putar gambar ; = pindah gambar

= Skala gambar ; = pilih objek

= seleksi gambar

2. Aplikasi Material

Pilih ; **M** ; Standard Arsitektur, *Mt Library, Open*; Standard sendiri, *Standard,*

Arsitektur, *Diffuse color*, ☒ *Diffuse map*, *Bitmap*;

<u>*Sub Object*</u>, *Standard*, *Multi/Sub object* ;

3. Aplikasi Material Mapping

Pilih ; ; <u>*Planar*</u> (roti), <u>*Cylindrikal*</u> (objek bentuk silinder), pilih *Combo* **UVW Map**, ubah *U Tile* dan *V Tile*

4. Menambah Objek Cahaya Interior

Top viewport; ;

Target Spot	Free Spot
Target Direct	Free Direct
Omni	Skylight
mr Area Omni	mr Area Spot

Edit\Clone = untuk kopi cahaya

5. Menambah Cahaya Eksterior

Top viewport; ;

Bones	Ring Array
Sunlight	Daylight
Biped	

, Atur *time*, *location* ;

, *Intensity* <u>Multiplier</u> **5**

6. Menambah Kamera

- *Top viewport*, ; ; *Target* ; *Klik kanan* 1 letak kamera ; *Klik kanan* 2 letak target ; ;

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3DS MAX 8

Perspective viewport, tekan **C**;

7. Membuat Path Animasi

- *Top viewpor*, ; ; Pilih **LINE** ; - *Create metode* + ☒ ***smooth*** ; buat garis kamera ; edit ; seleksi ; ; [F12}

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8. Membuat Aminasi

- , ☒ *Custom*, FPS = **20**, *Length* ***600***; ; pilih **Camera1** [*objek*]; ; ; ; ;

Klik *Path Constraint*; tombol *Add Path*; pilih ***LINE***;

9. Animasi Kamera Target

 pilih **Camera1.Target**; atur posisi **0**; Auto Key ; atur posisi awal *Target*; ; Auto Key ;

10. Render Animasi

- *Camera1 viewport*; *Rendering\Render*; ☒ *Active Time segment 0 to 100*, tombol ***Render***

11. Material

- *Material Foto*; Pilih objek, **M**, *Diffuse, Bitmap*
- *Material Tile*; Pilih objek, **M**, *Diffuse, Bitmap* **U10 V10**
- *Material Kaca*; Pilih objek, **M**, *Opacity 70, Diffuse, color* ***hijau***

BAGIAN : MENGGAMBAR 3Dsmax 8

JAM 1 : (1) Objeck Geometri; , [*standard primitives*], ***Box*** 200x100x5; [*Extendent Primitives*], ***RingWave*** R100 W50 H10; **(2) Objeck Shape**; [*Shape*], ***Circle*** 100, ***Line***;

3DS MAX 8

(3) **Pindah** F12; (4) **Rotasi** F12; (5) **Skala** ; (6) **ganti nama; (7) ganti warna; (8) Seleksi objek dgn nama**
JAM 2 : (1) Mesh, Klik kanan *Convert to Editable mesh*, (2) **zoom**
JAM 3 : (1)Gabung, , klik 1, [*Compound Object*], *Boolean*, ☒ *Substrction (a-b)*, *Pick Operand B*, Klik 2; **(2) Lofting**, buat LINE Smoth, Circle , pilih circle, [*Compound Object*], *Loft*, *Get Path*, pilih Line, , *Deformstion-Scale*, klik node 2, , • tengah garis, ; (3) **ShapeMerge**, buat TEAPOT R50, Text 20 , pilih teapot, [*Compound Object*], *SharpeMerge*, *Get Path*, pilih text, JAM 4 : **(1) Kamera, (2) Rendering, (3) Cahaya, (4) Material standard, (5) Material sendiri, (6) Transparasi & Refleksi, (7) Material Multi** JAM 5 : (1) **Tebal** ,text 100, , , Extrude, *Amount 30*, (2) **Trompet** cylinder R50H250, , , Taper, *Amount -0.85 Curve -1.4*, (3) **Acak**, Sphere R50, , , Noise, *X400Y150z300*,**(4) *halus***, text 100, Extrude, *Amount 30*, **(5) Garis**, teapot R50, Lattice , StrutsR1, JointsR2 , **(6) Tebal face**, shell. JAM 6 : **(1) Animasi sederhana, (2) Animasi Path**, (3) Render animasi JAM 7 : **(1) Volume Lights**, Spot, *Atmosphere&Effect*, Add, Volume light, setup, ubah warna, DesnityB **1, (2) Lenseffects**, omni, *Atmosphere&Effect*, Add, Vlens effects, setup, glow&ring&ray, size 20, **(3) Kabut**, **& api** [*helpers*|*Atmospheric Apparatus*|*SphereGizmo*]

BAGIAN : Photoshop Cs

A. TINGKAT PEMULA

(1) ***Warna***,

- Solid Color...
- Gradient...
- Pattern...
- Levels...
- Curves...
- Color Balance...
- Brightness/Contrast...
- Hue/Saturation...
- Selective Color...
- Channel Mixer...
- Gradient Map...
- Photo Filter...
- Invert
- Threshold...
- Posterize...

(2) ***Styles***,

- Blending Options...
- Drop Shadow...
- Inner Shadow...
- Outer Glow...
- Inner Glow...
- Bevel and Emboss...
- Satin...
- Color Overlay...
- Gradient Overlay...
- Pattern Overlay...
- Stroke...

(3) ***Filter***

- Artistic
- Blur
- Brush Strokes
- Distort
- Noise
- Pixelate
- Render
- Sharpen
- Sketch
- Stylize
- Texture
- Video
- Other

(4) ***Layer***, Baru, pindah posisii, atur posisi, hide gandakan [*drag+move+*], hapus, transparan Opacity: 100%, gabung [*\Layer\Merge layer*], nama, warna [*\Layer\New Fill Layer*]

B. TINGKAT MENENGAH

(1) ***Selection***, ; pindah, gandakan [, Alt+klik+pindah], kopi [*\Edit\copy* + *\Edit\paste*], hapus **DEL**, ubah seleksi [*\Edit\transform*], halus sisi [*\Select\Feather*],

C. TINGKAT DESIGN

(1) ***Pemilihan objek***, , , (2) ***Text***, , , (3) ***Kopi***, pilih, *\Select\Feather*
(3) ***Buram*** *\Filter\Blur\Gaussian Blur*, (4) ***Sinar*** *\Filter\Render\Lens Flare* (5) ***Tambah Objek*** , *\File\Open*, *.jpg, pilih drag ke gambar baru

D. SIMPAN

Menu *\File\Save As..*, *.jpg

BAGIAN : Freehand

(1) Editing, pilih objek [*klik*]
Object | Str | Fill | Te | Doc

(2) Warna, pilih objek [*klik*], ubah warna, .
Mixer | Tints

(3) Panel penyimpanan,
Swatches | Layers | Styles

(4) Lembar kerja, menu *\View*

Page Rulers	Fit Selection
Text Rulers	Fit To Page
Grid	Fit All
Perspective Grid	Magnification
Guides	Custom

07
Pagemaker
(5) Gambar
A
BAGIAN : Page Maker
(1) Gambar
(2) Text, menu \Type
Font
Size
Leading
Type Style
Expert Tracking
Horizontal Scale
Character... ^T
Paragraph... ^M
Indents/Tabs... ^I
Hyphenation...
Alignment
Style
Define Styles... ^3
(3) Editing, pilih objek [klik]
X 4.377 in
Y 5.989 in
W 1.188 in 100%
H 1.063 in 100%
0°
-1.2°
\Element\Fill and Stroke
(4) Zoom,
100
(5) Preferences, \File\Preferences\General mm
(6) Bullets + out,

(7) Box text,
T,
Styles
Text Wrap...
Fill and Stroke...
Edit, Klik kanan
Rounded Corners...
Putar
08
(8) Layer & master layer
Layers
Master Pages
Layer 2
Master Pages
[None]
Applying Master Page
Baru ; Hapus ; Hide ; Lock ;
Perletakan \Element\Arrange\
(9) Style & color
Styles
Colors
Body text
Caption
Styles
Colors
Tint: 100%
Blue
Baru ; Hapus ; Transparan 100%
(10) Halaman, Halaman baru \Layaout\insert pages, Mengurutkan halaman \Layout\Sort pages, Kolom \Layout\Column Guide
Pagemaker

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Corel Draw
BAGIAN : Corel Draw
(1) Gambar
(2) Corel Capture
(3) Editing/properties
x: 3.246 "
y: 8.334 "
2.313 "
1.347 "
100.0
100.0
0.0
Hairline
(4) Text
Default Graphic *
AvantGarde Bk BT
24
(5) Transform
x: 4.705 "
y: 7.061 "
3.266 "
3.226 "
100.0
100.0
0.0
4.705 "
7.061 "
0.0
0.0
(6) ZOOM
100%
(7) Menu; Perletakan \Arrange\order,
(8) Effect, \Effect\..
Bitmap \Bitmaps
Artistic Media
Blend
Contour Ctrl+F9
Envelope Ctrl+F7
Extrude
Lens Alt+F3
3D Effects
Art Strokes
Blur
Camera
Color Transform
Contour
Creative
Distort
Noise
Sharpen

BAGIAN : AUTOCAD 2D&3D

A. DASAR-DASAR GAMBAR 2D

(1) **Element** ; menu, toolbar, command line, short cut, (2) **Koordinat**; (X,Y), (@Lx,Ly), (Lr<sudut), (3) **SNAP** ; *DSETTING*,

B. MENGGAMBAR 3D

1. **Menggambar 2D** (draw)

2. **Bantuan**

C. DASAR-DASAR GAMBAR 3D

1. **Layer** ; , ubah warna
2. **Perintah** ; BLOCK, PLINE , PEDIT

D. MENGGAMBAR 3D

1. **Menggambar solid** (Solid)

2. **Menggambar permukaan** (Surfaces)

3. **Memperbaiki gambar solid** (Solid Editing)

4. **Tampilan** (View)

01

MS PROJECT

Pertemuan : 1

1.**Time schedule & Critical Path Metode** [I.1&2]
2. **Element windows ms project**; Menu, toolbar, shortcut, view bar, task sheet, bar chart
3. **File baru** */File/New...* ; password
4. **Tanggal proyek** *\Project\Project Information...* & **properties** *\File\Properties*
5. **Kalender** *\Tools\Change Working Time...*[I.3]
6. **Tulis kegiatan** pada gant chart [I.4]

Pertemuan : 2

1. **Daftar kegiatan**, *\View\Gant Chart*; Sub/tingkat kegiatan, Hapus **DEL**, Batal **Ctrl+Z**, Sisip **INSERT**, Show/hide teks + −, Outline tesk ← →, tampilkan nomor outline *\tools\option -tab view - Show outline Number*, Memasukkan proyek *\Insert\Project*
2. **Memasukan daftar kegiatan**; Terjadi sekali *\View\Gantt Chart*, isi *Task Name*, Terjadi berulang-ulang *\Insert\Recurring Task*, Milestone d=0 *\View\Gantt Chart*, isi *Duration* = **0d**, Milestone d>0 *Task information-tab Advanced √ Mark task a milestone* duration >0
3. **Mengganti standart Duration\Work**, *\Tools\Options-tab Schedulle, Duration entered in* **days**, *Work entered in* **days**

4. **Mengganti mata uang**, *\Tolls\Optin – tab view*, Symbol **Rp.**
5. **Menaksir Tanggal** *\Tools\Options...* - tab *Schedule* Pada *Duration is entered in* = **Days**; Dari task name, Dari bar chart *geser*
6. **Membuat catatan** Tekan toolbar *Task Notes* atau

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Pertemuan : 3

1. **Hubungan kegiatan**, FS 1fs, FF 3ff, SS 5ss, SF 7sf, Lag Time negatife FS-50%, Lag time positif FS+ 1 d
[1a] Isi **Predecessor**, [1b] CTRL+2 **Taskname**, [1c] Predessor, [1d] Barchart **drag**
2. **Ketergantungan kegiatan** *\View\Gantt Chart*, isi *Predecessor* atau Predessor
3. **Batasan waktu** Tab *Advanced*, isi *Constraint Type*; Default As Soon As Possible ;
3. **Hubungan kegiatan dengan waktu** Tab *Advanced*, Tab *Advanced*, isi *Task Type*

Pertemuan : 4

1. **View bar**; calender, Gantchart **Diagram batang**, Networkdiagram **flowchart**, TaskUsage **diagram angka**, Tracking gant **diagram batang pelaksanaan**, Resource graph **diagram batang SDM**, Resource sheet **lembar SDM**, Resource

MS PROJECT

03

Usage **Diagram angka SDM**, More view **gabungan** (*\windows\split*)

2. **View Table**, Cost **biaya**, Entry **tanggal**, Hyperlink **hub**, Schedulle **jadwal**, Summary **total**, Tracking **pelaksanaan**, Usage **pemakaian**, Variance **perbedaan**, Work **pekerjaan**

3. **Task sheet**, Mengganti ket. Kolom *klik 2x pada judul*, Sembunyikan kolom *klik kanan pada judul* lalu ***Hide column***, Sisip kolom *klik kanan pada judul* lalu ***Insert column***, Ganti huruf *klik kanan pada judul* lalu ***Text style***

4. **Bar chart**, mengenal barchart

Merubah judul barchart *klik 2x pada judul*, Merubah format barchart *klik 2x pada barchart*, merubah format barstyle *\Format\bar style..*

5. **Gridline**, mengenal gridline, merubah format gridline *\format\gridline…*

6. **Merubah jenis huruf**, *\Format\text style..*,

MS PROJECT

Pertemuan : 5

BIAYA

1. **Biaya Proyek**, [1] Langsung –*bhn, tenaga kerja, sub kontraktor, peralatan*, [2] Tak langsung un management –*biaya umum (adminnistrasi, listrik dll) dan keuntungan* [3] *Biaya tetap* (Fixed cost), *\View\Gantt chart- Table\Cost*, isi *Fixed Cost* dan *Fixed Cost Accrual*

Biaya langsung

Biaya tak langsung

Task Name	Duration	Predecessors	Resource Names
Proyek fiktif	35 days		Biaya Umum
Start	0 days		

	Task Name	Fixed Cost	Fixed Cost Accrual	Total Cost
1	− Proyek fi	Rp.0	Prorated	Rp.5,275,000
2	Start	Rp.0	Prorated	Rp.(

2. **Lembar kerja resource sheet,**
3. **Cara pembayaran proyek** *(Acruel at)*, (a) ***Start*** *unt beli bahan*, (b) ***Prorate*** *unt harian tenaga kerja*, (c) ***End*** *unt kerja borongan*, (d) **Termyn**

− D	15 days	6	
D1	0 days		Sub-kon 2.1
D2	5 days	7	Sub-kon 2.2
D3	5 days	8	Sub-kon 2.3
D4	0 days	9FS+5 days	Sub-kon 2.4
E	2 days	4	Pekerja[4],Semen[5 Zak

Termyn

4. **Memasukkan sumber daya**, *\View\Resource Sheet- Table\Entry, \Tools\Resources\Resources Assign* , Merubah satuan unit *\Tools\options-tab schedulle – show assigment units as* ***Decimal***
5. **Memasukkan volume**, Pada *Assign Resource*, isi *Units* = **Volume**, Max 2 angka desimal
6. **Memasukkan biaya dan cara pembayaran**
7. **Memasukkan waktu kerja**

Pertemuan : 6

INPUT DATA RENCANA PROYEK

1. **Input Secara Detail menggunakan Analisa BOW**, unt tenaga kerja dibagi *duration*

No.	Uraian Pekerjaan	Waktu	Vol	BOW	Total	Units
1	2	3	4	5	6=4x5	6/3
1	Pasang bata	3d	3m³	**Bahan** :		
				475 bh *Batu Bata*		1425 bh
				3.9 zak *Semen*		11.7 zak
				0.38 m³ *Pasir*		1.14 m³
				Tenaga :		
				2.5 *Tukang batu*	15	2.5 org
				0.25 *Kepala Tukang*	1.5	0.25 org
				7.5 *Pekerja*	45	7.5 org
				0.38 *Mandor*	2.25	0.38 org

- Untuk koefisien Units max 2 angka decimal
- Untuk sumber daya tenaga harus dibagi dengan waktu (Duration)

2. Input Secara Unit Price

No.	Uraian Pekerjaan	Vol	Sat	Harga Satuan (Rp)	Harga Total (Rp)
1	2	3	4	5	3*5
1	Galian tanah	228.76	m3	14,000.00	3,202,640.00
2	Urug tanah kembali	137.26	m3	6,000.00	823,560.00
3	Buang tanah	91.50	m3	10,000.00	915,000.00
	Urug pasir bawah				

Pertemuan : 7

PERATAAN SUMBER DAYA

1. **Lintasan kritis**, *\Format\Text Styles*, Pada *Item to change* = **Critical Task,** Pada *Color* = **beri warna merah**
2. **Levelling, [1] Cara ubah duration** pada critical task, [2] **Cara pengguna sumber daya**

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MS PROJECT